



State Fire Marshal's Office

2002 Fireworks Statistical Report

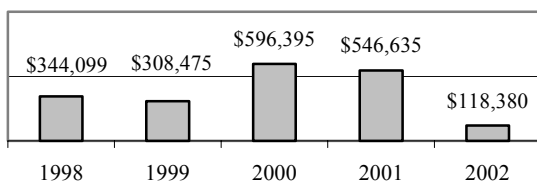


There were 231 fireworks incidents reported to the State Fire Marshal in 2002 by fire departments and hospital emergency rooms.

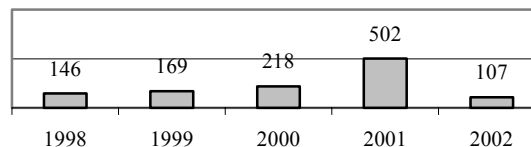
Reports Received	Total Agencies in WA	Agencies Reporting	Reports Received
Fire Departments	619	24	118
Hospital Reports	131	36	113
Totals	750	60	231

The number of reported fires associated with fireworks was lower than those reported for 2001. This is contributed to the decrease in the number of fire departments reporting. These firework related fires caused an estimated loss of \$118,380.

Reported Fireworks Fire Loss



Reported Fireworks Fire Incidents



Based on the reports received, illegal fireworks were identified as the cause in 61% of all reported firework fires and \$101,805 property loss or 86% of the estimated total loss from fireworks-caused fires. Legal fireworks were identified in 9% of the reported fires with a loss of \$10,725. In the remaining 5% of the fires, the type of fireworks was not identified by the fire departments.

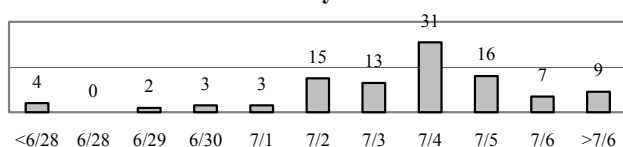
Type of Fire	Status of Fireworks Device			
	Legal	Illegal	Unidentified	Total
Vegetation/Wildland	12	46	16	74
Residential	5	14	4	23
Commercial	0	4	3	7
Vehicle	2	1	5	3
Other	0	0	0	0
Totals	19	66	23	107

Wildland areas are great risk from fires caused by fireworks. Of the fire incidents reported, 70 percent resulted in wildland fires, with a fire loss of \$325. Seven percent were commercial fires with a fire loss of \$1,200 and 21 percent were residential fires with the greatest fire loss of \$116,155.

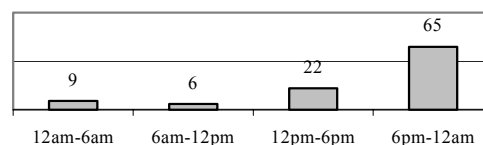
	Amount of Loss by Status of Fireworks Device			
Type of Fire	Legal	Illegal	Unidentified	Total
Residential	\$0.00	\$101,130.00	\$5,000.00	\$116,155.00
Vegetation/Wildland	\$10,025.00	\$175.00	\$150.00	\$325.00
Commercial	\$0.00	\$500.00	\$700.00	\$1,200.00
Vehicle	\$700.00	\$0.00	\$0.00	\$700.00
Other	\$0.00	\$0.00	\$0.00	\$0.00
Totals	\$10,725.00	\$101,805.00	\$5,850.00	\$118,380.00

Fires and injuries by date and time of day clearly indicate that fireworks incidents most often occur on the date that they are most widely used, July 4 between the hours of 6 p.m. and 12 a.m.

Fires By Date

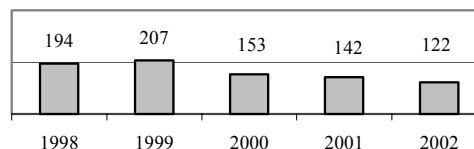


Fires by Time of Day

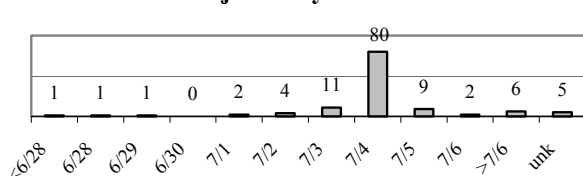


The number of fireworks related injuries reported for 2002 was 120. 15% lower than 2001. The number of hospitals reporting fireworks-related injuries is 7% lower. The date and time of day most injuries occurred was on July 4 between 6 p.m. and midnight.

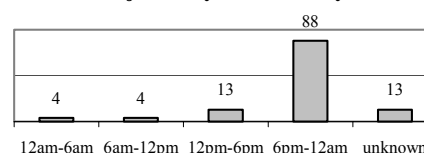
Fireworks-Related Injuries



Injuries by Date



Injuries by Time of Day



The 2001 fireworks season accounted for 122 fireworks related injury incidents reported. The most common places injured were the hand and face (see Table #1). The type of injury caused most often was burns at 66%. The next leading injury was trauma at 33% and next was amputations 1% (see Table #2). There was no adult supervision in 18% of these incidents.

Body Part Injured - Table #1				
Body Part	Legal	Illegal	Unknown	Total
Face/Head	13	15	5	33
Eye	4	9	3	16
Hand/Fingers	12	29	4	45
Arm	2	8	4	14
Leg/Foot	4	12	2	18
Torso	4	7	2	13
Totals	39	80	20	139

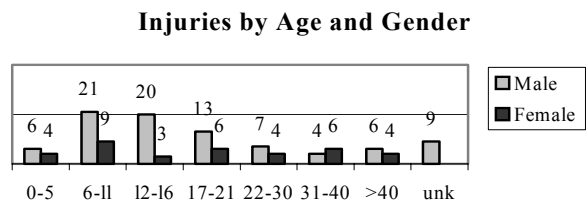
Some Incident Reports account for more than one injury in the same report.

<i>Type of Injury – Table #2</i>				
	<i>Status of Firework</i>			
<i>Type of Injury</i>	<i>Legal</i>	<i>Illegal</i>	<i>Unknown</i>	<i>Total</i>
Burn 1st Degree	13	13	6	32
Burn 2 nd Degree	19	24	10	53
Burn 3 rd Degree	1	3	0	4
Trauma	7	33	5	45
Amputation	0	2	0	2
Totals	40	75	21	136

Table #3 shows the types of fireworks devices that were involved in these incidents. Illegal fireworks were the cause of 58 incidents or 48 percent while legal fireworks were responsible for 34 incidents or 28 percent. Of the 34 incidents involving legal devices, Roman candles caused 10 or 29 percent of the incidents followed by sparklers at 7 or 21 percent of the incidents.

<i>Injury by Type of Device – Table #3</i>	
Legal	# of Incidents
Roman Candle	10
Sparkler	7
Cone Fountain	5
Multi Aerial	4
Novelty	3
Wheel	2
Ground Bloom Flower	1
Jumping jack	1
Smoke bomb	1
Total legal Devices	34
Illegal	# of Incidents
Firecracker	17
Homemade Explosive Device	12
Bottlerocket	10
Altered Fireworks	6
Public Display Mortars	5
Missile Rocket	5
M80	2
Cherry Bomb	1
Total Illegal Devices	58
Unknown Device Type	30
Total	122

The information shown on the chart below can help target an audience. This chart shows males between the ages of 6 and 16 years old are at greatest risk of fireworks related injuries.



The leading cause of fireworks-related injuries is “holding” followed closely by “altered/tampering”. This is of great concern because altering and tampering with fireworks is the same as making an illegal explosive device, is a federal offence and is very dangerous.

These are the behaviors that need to be changed to prevent fireworks-related injuries.

<i>Cause of Injury</i>	
Holding	30
Altered/Tampering	11
Leaning	9
Surface	8
Throwing	7
Delayed Ignition	2
Other/unknown	55
Total	122

All Incidents by County

County	*Fire Depts Reporting	Reports Received	Hospitals Reporting	Reports Received	Total Reports	Injury Incidents	Fire Incidents
Asotin	0	0	1	1	1	1	0
Clark	1	1	2	11	12	11	1
Columbia	0	0	*1	1	1	0	0
Ferry	0	0	*1	1	1	0	0
Franklin	0	0	1	1	1	1	0
Grant	0	0	*2	4	4	3	0
Grays Harbor	0	0	1	3	3	3	0
Island	0	0	1	2	2	2	0
King	6	32	4	22	54	29	26
Kitsap	1	9	2	6	15	5	7
Kittitas	0	0	*1	1	1	0	0
Klickitat	0	0	1	1	1	1	0
Lewis	0	0	1	3	3	3	**1
Lincoln	1	1	1	1	2	1	1
Mason	2	2	1	4	6	4	2
Pacific	0	0	2	2	2	2	0
Pierce	5	17	2	5	22	8	15
Skagit	0	0	1	1	1	1	0
Snohomish	1	13	2	13	26	14	**13
Spokane	2	18	2	3	21	5	16
Thurston	3	19	2	15	34	16	18
Walla Walla	1	5	2	7	12	7	5
Whatcom	1	1	1	4	5	4	**2
Whitman	0	0	1	1	1	1	0
Totals	24	118	36	113	231	122	107

- **Reported "No incidents to report."*
- ***A hospital that reported a fire also.*